ThinkVision

L2440x Wide Flat Panel Monitor
User's Guide

Product numbers
4421-HB2

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Safety information

Before installing this product, read the Safety Information.

مج، يجب قراءة دات السلامة

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 Safety Information
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Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.
Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.
Avant d'installer ce produit, lisez les consignes de sécurité.
Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας
(safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.
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z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по
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Pred inštaláciou tohto produktu si prečítajte bezpečnostné informácie.

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安裝本產品之前，請先閱讀「安全資訊」。

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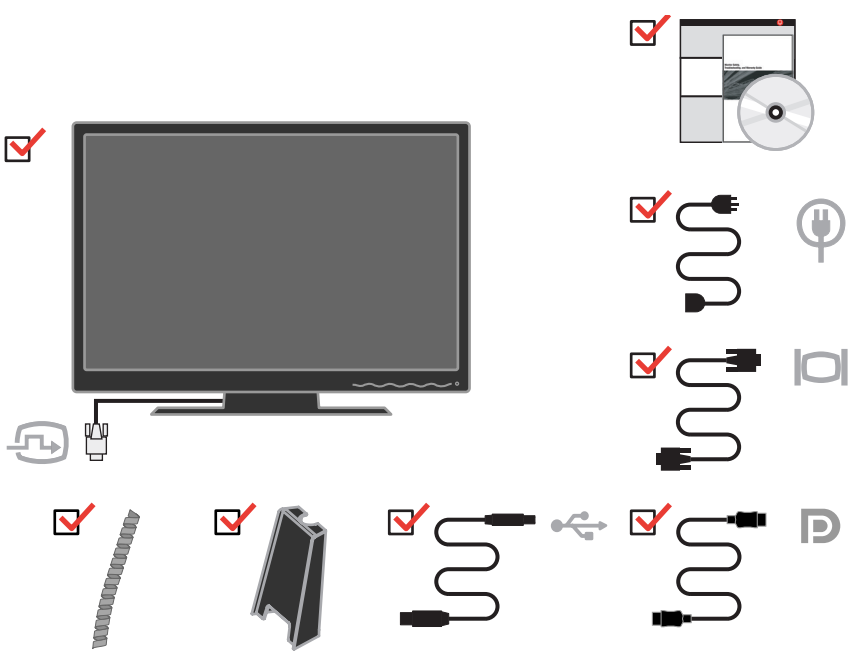
Chapter 1. Getting started

This User's Guide contains detailed information on the ThinkVision® L2440x Wide Flat Panel Monitor. For a quick overview, please see the Setup Poster that was shipped with your monitor.

Shipping contents

The product package should include the following items:

- Setup Poster
- Monitor Safety, Troubleshooting, and Warranty Guide
- Reference and Driver CD
- ThinkVision L2440x Wide Flat Panel Monitor
- Power Cord
- Digital Cable - Attached to monitor
- Analog Signal Cable
- DP Cable
- USB Cable
- Cable Cover
- Cable Wrapper



Note: To attach a VESA mount, please see "Detaching the monitor stand" on page 2-9.

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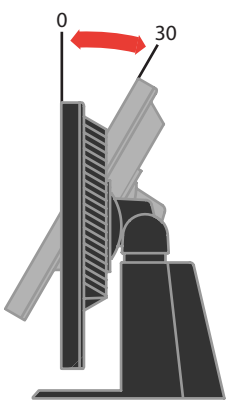
Product overview

This section will provide information on adjusting monitor positions, setting user controls, and using the cable lock slot.

Types of adjustments

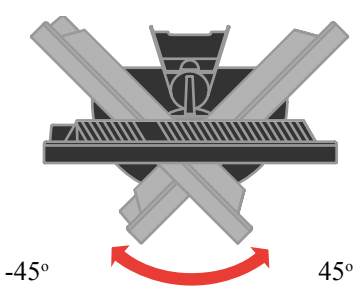
Tilt

Please see the illustration below for an example of the tilt range.



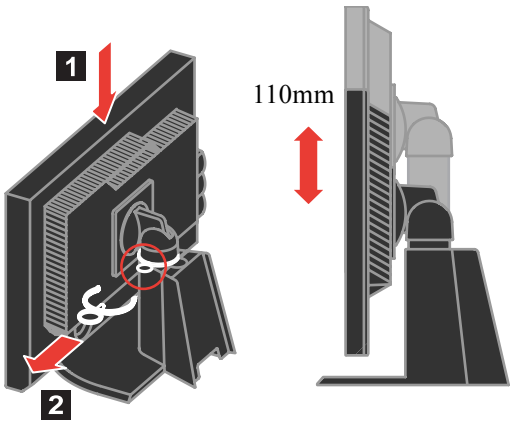
Swivel

With the built-in pedestal, you can tilt and swivel the monitor for the most comfortable viewing angle.

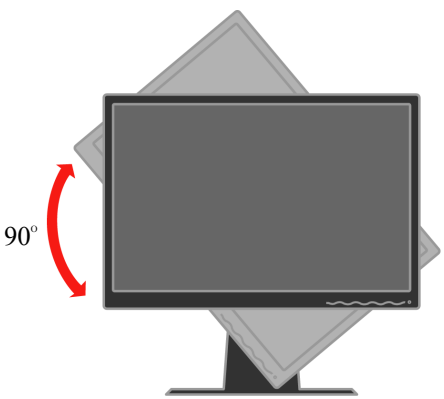


Height Adjustment

After pressing the top of the monitor, remove the fixed pin and adjust the height of the monitor.



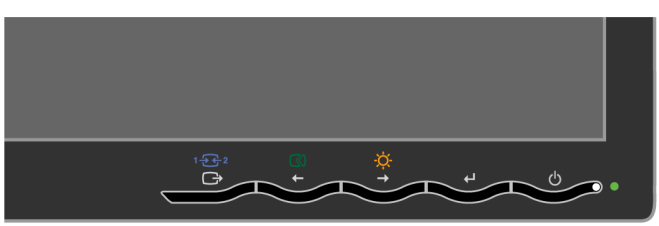
Monitor Pivot



- Adjust height to the top position before rotation the monitor.
- Rotate clockwise until the monitor stops at 90°.

User controls

Your monitor has controls on the front which are used to adjust the display.

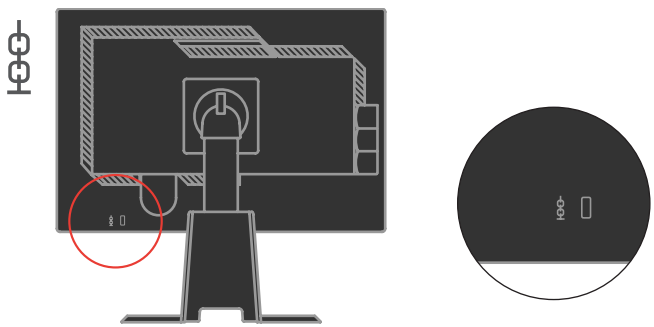


For information on how to use these controls, please see

“Adjusting your monitor image” on page 2-3.

Cable lock slot

Your monitor is equipped with a cable lock slot located on the rear of your monitor (in the lower left corner). Please follow the instructions that came with the cable lock to attach it.



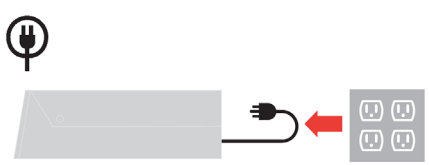
Setting up your monitor

This section provides information to help you set up your monitor.

Connecting and turning on your monitor

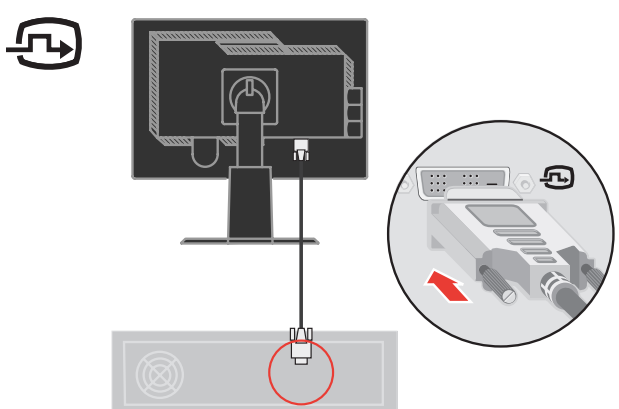
Note: Be sure to read the Safety Information located in the *Monitor Safety, Troubleshooting, and Warranty Guide* before carrying out this procedure.

1. Power off your computer and all attached devices, and unplug the computer power cord.

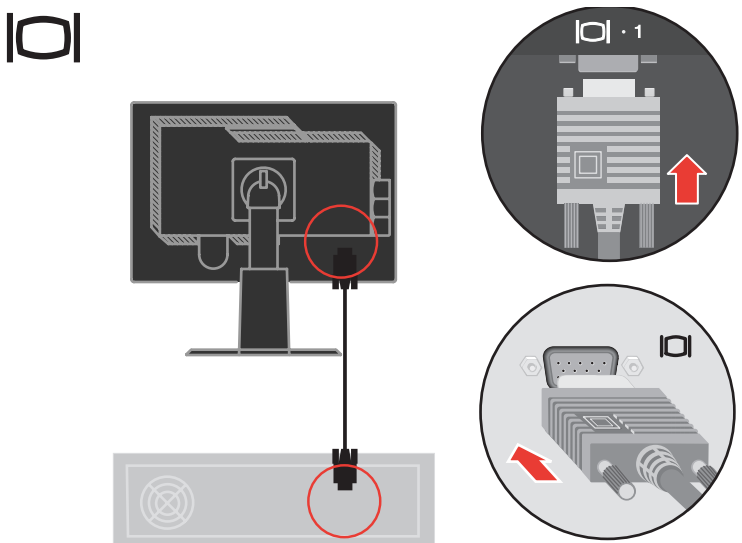


2. Connect the digital signal cable to the video port on the back of the computer.

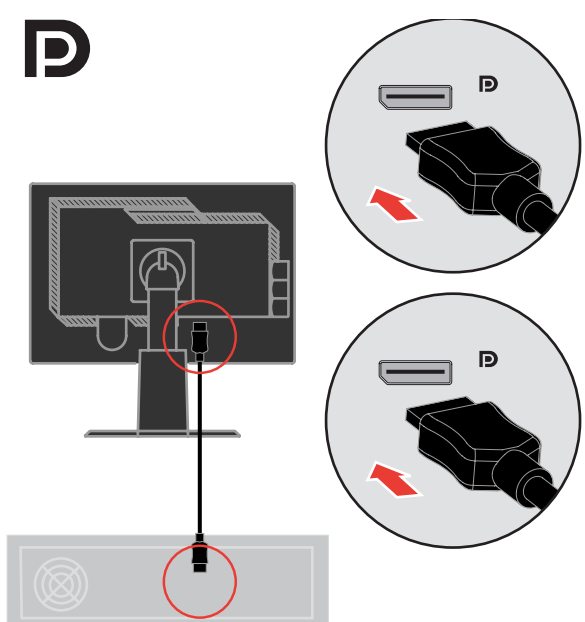
Note: One end of the signal cable is already pre-attached to your monitor.



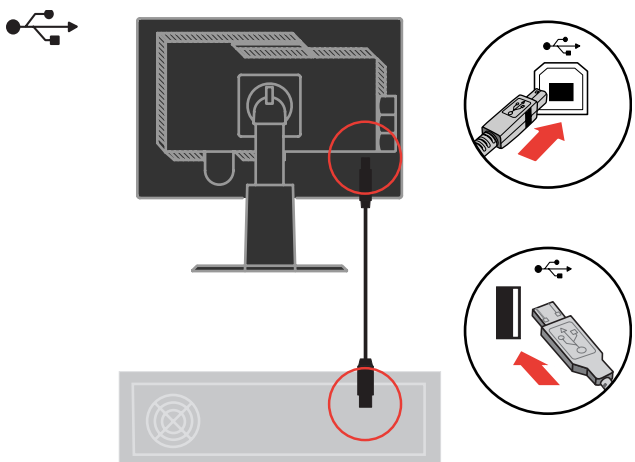
Connect the analog signal cable to the D-SUB connector of the monitor and the other end on the back of the computer.



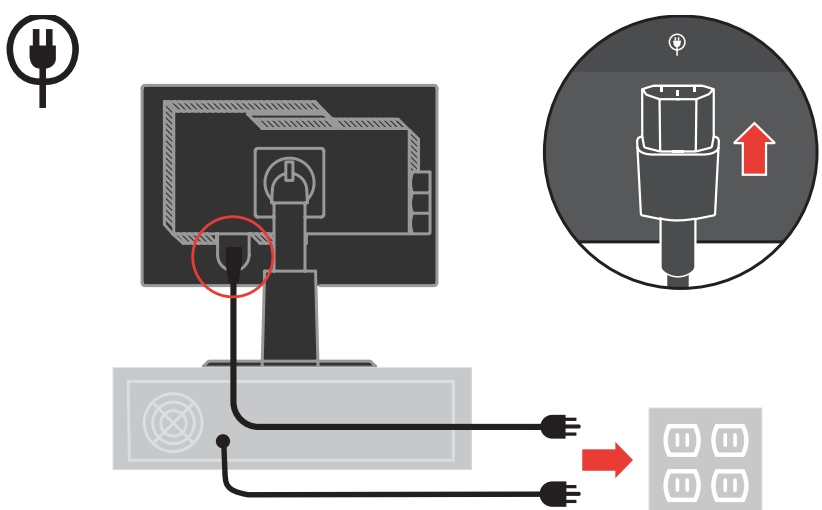
Connect one end of the DP cable to the DP connector on the back of the computer, and the other end to the DP connector on the monitor.



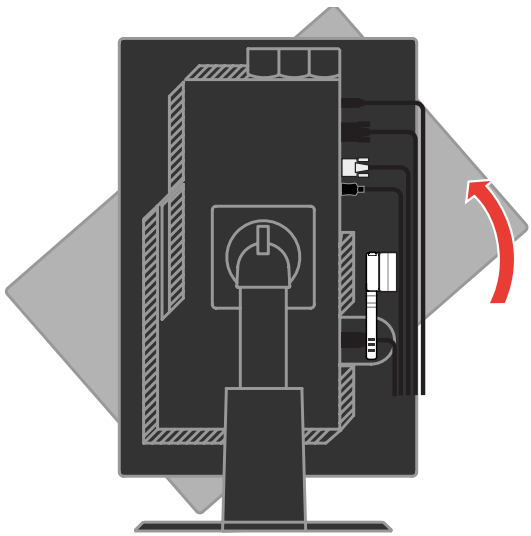
Connect one end of the USB hub cable to the USB connector on the back of the computer, and the other end to the upstream USB connector on the monitor.



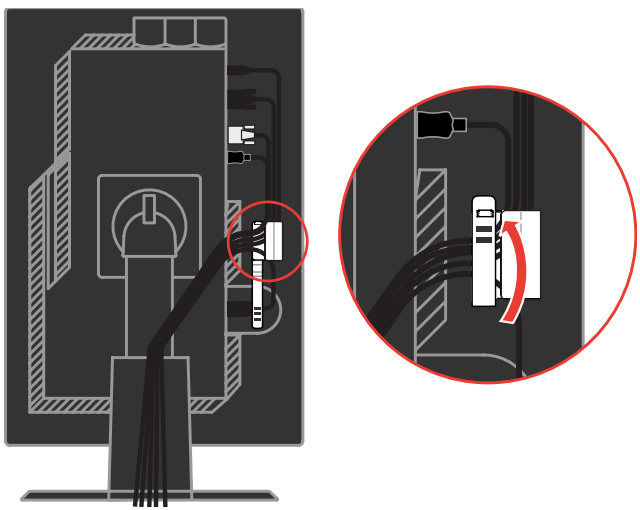
Plug the monitor power cord and the computer cord into grounded electrical outlets.
Note: A certified power supply cord has to be used with this equipment. The relevant national installation and/or equipment regulations shall be considered. A certified power supply cord not lighter than ordinary polyvinyl chloride flexible cord according to IEC 60227 (designation H05VV-F 3G 0.75mm^2 or H05VVH2-F2 3G 0.75mm^2) shall be used. Alternative a flexible cord be of synthetic rubber according to IEC 60245 (designation H05RR-F 3G 0.75mm^2) shall be used.



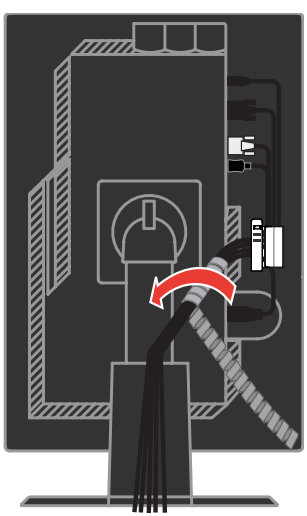
Rotate the head of the monitor into portrait view.



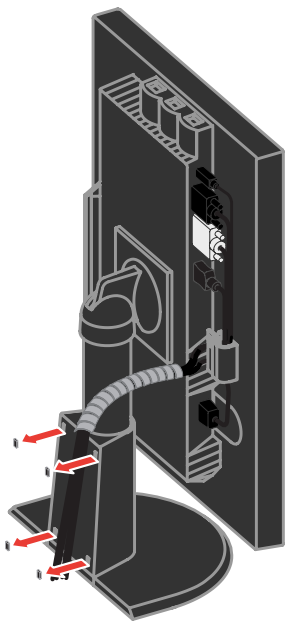
Place the cables through the Main Clip. Then fasten the clip.



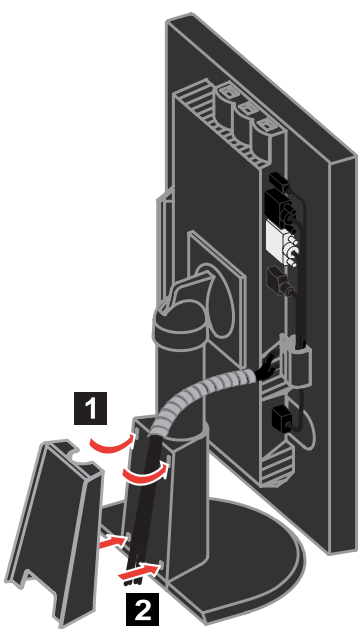
Wrap the Cable Wrapper around the cables.



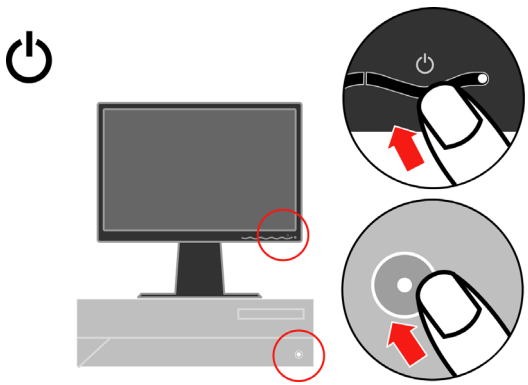
Remove the Rubber Cover from the back of the stand.



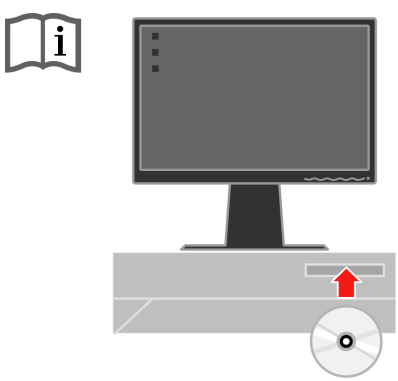
Replace the Cable Cover.



Power on the monitor and the computer.



To install the monitor driver, insert the *Reference and Driver CD*, click **Install driver**, and follow the on-screen instructions.



To optimize your monitor image, if using the analog cable, press the Automatic Image Setup key. Automatic image setup requires that the monitor is warmed up for at least 15 minutes. This is not required if you are using the DVI cable.

Note: If automatic image setup does not establish the image that you prefer, perform manual image setup. See “Manual image setup” on page 3-4.

Registering your option

Thank you for purchasing this Lenovo® product. Please take a few moments to register your product and provide us with information that will help Lenovo to better serve you in the future. Your feedback is valuable to us in developing products and services that are important to you, as well as in developing better ways to communicate with you. Register your option on the followingWeb site:

http://www.lenovo.com/register

Lenovo will send you information and updates on your registered product unless you indicate on the Web site questionnaire that you do not want to receive further information.

Chapter 2. Adjusting and using your monitor

This section will give you information on adjusting and using your monitor.

Comfort and accessibility

Good ergonomic practice is important to get the most from your personal computer and to avoid discomfort. Arrange your workplace and the equipment you use to suit your individual needs and the kind of work that you perform. In addition, use healthy work habits to maximize your performance and comfort while using your computer.

For more detailed information on any of these topics, visit the Healthy Computing Web site at: http://www.ibm.com/pc/ww/healthycomputing

Arranging your work area

Use a work surface of appropriate height and available working area to allow you to work in comfort.

Organize your work area to match the way you use materials and equipment. Keep your work area clean and clear for the materials that you typically use and place the items that you use most frequently, such as the computer mouse or telephone, within the easiest reach.

Equipment layout and setup play a large role in your working posture. The following topics describe how to optimize equipment setup to achieve and maintain good working posture.

Positioning and viewing your monitor

Position and adjust your computer monitor for comfortable viewing by considering the following items:

- **Viewing distance**: Optimal viewing distances for monitors range from approximately 510mm to 760mm (20 in to 30 in) and can vary depending on ambient light and time of day. You can achieve different viewing distances by repositioning your monitor or by modifying your posture or chair position. Use a viewing distance that is most comfortable for you.
- **Monitor height**: Position the monitor so your head and neck are in a comfortable and neutral (vertical, or upright) position. If your monitor does not have height adjustments, you might have to place books or other sturdy objects under the base of the monitor to achieve the desired height. A general guideline is to position the monitor such that the top of the screen is at or slightly below your eye-height when you are comfortably seated. However, be sure to optimize your monitor height so the line of site between your eyes and the center the monitor suits your preferences for visual distance and comfortable viewing when your eye muscles are in a relaxed state.

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- **Tilt**: Adjust the tilt of your monitor to optimize the appearance of the screen content and to accommodate your preferred head and neck posture.
- **General location**: Position your monitor to avoid glare or reflections on the screen from overhead lighting or nearby windows.

The following are some other tips for comfortable viewing of your monitor:

- Use adequate lighting for the type of work you are performing.
- Use the monitor brightness, contrast, and image adjustment controls, if equipped, to optimize the image on your screen to meet your visual preferences.
- Keep your monitor screen clean so you can focus on the screen's contents.

Any concentrated and sustained visual activity can be tiring for your eyes. Be sure to periodically look away from your monitor screen and focus on a far object to allow your eye muscles to relax. If you have questions on eye fatigue or visual discomfort, consult a vision care specialist for advice.

Quick tips for healthy work habits

The following information is a summary of some important factors to consider to help you remain comfortable and productive while you use your computer.

- **Good posture starts with equipment setup**: The layout of your work area and the setup of your computer equipment have a large effect on your posture while using your computer. Be sure to optimize the position and orientation of your equipment by following the tips outlined in "Arranging your work area" on page 2-1 so you can maintain a comfortable and productive posture. Also, be sure to use the adjustment capabilities of your computer components and office furniture to best suit your preferences now and as your preferences change over time.
- **Minor changes in posture can help avoid discomfort**: The longer you sit and work with your computer, the more important it is to observe your working posture. Avoid assuming any one posture for an extended period of time. Periodically make minor modifications in your posture to help deter any discomforts that might arise. Make use of any adjustments that your office furniture or equipment provide to accommodate changes in posture
- **Short, periodic breaks help ensure healthy computing**: Because computing is primarily a static activity, it is particularly important to take short breaks from your work. Periodically, stand up from your work area, stretch, walk for a drink of water, or otherwise take a short break from using your computer. A short break from work gives your body a welcome change in posture and helps to ensure you remain comfortable and productive while you do work.

Accessibility information

Lenovo is committed to providing greater access to information and technology to people with disabilities. With assistive technologies, users can access information in the way most appropriate to their disability. Some of these technologies are already provided in your operating system; others can be purchased through vendors or accessed at: http://www.ibm.com/able/

Adjusting your monitor image

This section describes the user control features used to adjust your monitor image.

Using the direct access controls

The direct access controls can be used when the On Screen Display (OSD) is not displayed.

Table 2-1. Direct access controls

Icon	Control	Description
	Image Setup	Activates automatic image adjustment.
	Brightness	Direct access to Brightness adjustment.
1 2	Input Change	Switches the video input source.

Using the On-Screen Display (OSD) controls

The settings adjustable with the user controls are viewed through the On-Screen Display (OSD), as shown below.

To use the controls:

1. Press ↵ to open the main OSD menu.
2. Use ← or → to move among the icons. Select an icon and press ↵ to access that function. If there is a sub-menu, you can move between options using ← or → , then press ↵ to select that function. Use ← or → to make adjustments. Press ↵ to save.
3. Press ⮌ to move backwards through the sub-menus and exit from the OSD.
4. Press and hold ↵ for 10 seconds to lock the OSD. This will prevent accidental adjustments to the OSD. Press ↵ and hold for 10 seconds to unlock the OSD and allow adjustments to the OSD.
5. Enables DDC/CI by default. Use OSD Exit Key, Press and hold the ⮌ button for 10 seconds to disable / enable DDC/CI function. The words " DDC/CI Disable" or “DDC/CI Enable” will be displayed.

Table 2-2. OSD functions

OSD Icon on Main Menu	Submenu	Description	Controls and Adjustments (Analog)		Controls and Adjustments (Digital)
Brightness-/Contrast	Brightness	Adjusts overall brightness	←	→	Same as Analog
	Contrast	Adjusts difference between light and dark areas	←	→	
Image Position	Horizontal Position	Moves the image left or right.	←	→	Controls Locked not required for digital input
	Vertical Position	Moves the image up or down.	←	→	
Image Setup	Automatic	Automatically optimizes the image.			
	Manual	Manually optimizes the image. See "Menual mage setup" page 3-4. · Clock · Phase · Save			
Image Properties	Color	Adjusts intensity of red, green, and blue.			Same as Analog
	Preset mode	· Reddish · sRGB * · Neutral · Bluish			
	Custom	· Red: Increases or decreases the saturation of "red" in the image. · Green: Increases or decreases the saturation of "green" in the image. · Blue: Increases or decreases the saturation of "blue" in the image. · Save: Saves the custom color choices.			
	Input Signal	This monitor can accept video signals through three different connectors. Most desktop computers use a D-SUB connector. Select digital among OSD Controls when you use DVI connector. · Selects D-SUB (Analog) · Selects DVI (Digital) · Selects DP			
	Scaling	Expends image size to full screen. · Off (Original AR): same Aspect Ratio with input signal. · On (Full): Expends image size to full screen.			
Options	Information	Shows resolution, refresh rate, and product details. Note: This screen does not allow any changes to the settings.			Same as Analog
	Menu Language	This section lists the languages supported by your monitor. **Note:** The language chosen only affects the language of the OSD. It has no effect on any software running on the computer.			

* Note: Brightness and Contrast can not be adjusted in sRGB mode.

Table 2-2. OSD functions (continued)

OSD Icon on Main Menu	Submenu	Description	Controls and Adjustments (Analog)	Controls and Adjustments (Digital)
Options	Menu Position	Adjusts menu location on the screen.		Same as Analog
	Default	Returns the menu position to the default settings.		
	Custom	・Horizontal: Changes the horizontal position of the OSD. ・Vertical: Changes the vertical position of the OSD. ・Save		
	Factory Default	・Cancel ・Reset Resets monitor to the original factory settings.		
	Accessibility	Change button repeat rate and menu time-out settings. Button repeat rate: Select ← or → to change. ・ Off ・ Default ・ Slow Menu time out: Sets the length of time the OSD will remain active after the last time a button is pressed.		
Exit		Exit the main menu		Same as Analog

Selecting a supported display mode

The display mode the monitor uses is controlled by the computer. Therefore, refer to your computer documentation for details on how to change display modes.

The image size, position and shape might change when the display mode changes. This is normal and the image can be readjusted using automatic image setup and the image controls.

Unlike CRT monitors, which require a high refresh rate to minimize flicker, LCD or Flat Panel technology is inherently flicker-free.

Note: If your system has previously been used with a CRT monitor and is currently configured to a display mode outside the range of this monitor, you may need to re-attach the CRT monitor temporarily until you have re-configured the system; preferably to 1920 x 1200 at 60 Hz, which is the Native Resolution Display mode.

The display modes shown below have been optimized at the factory.

Table 2-3. Factory set display modes

Addressability	Refresh rate
640 x 350	70 Hz
640 x 480	60 Hz, 66 Hz, 72 Hz, 75 Hz
720 x 400	70 Hz
800 x 600	60 Hz, 72 Hz, 75 Hz
1024 x 768	60 Hz, 70 Hz, 75 Hz
1152 x 864	75 Hz
1280 x 1024	60 Hz, 72 Hz, 75 Hz
1360 x 768	60 Hz
1440 x 900	60 Hz, 75 Hz
1600 x 1200	60 Hz, 70 Hz, 75 Hz
1680 x 1050	60 Hz
1920 x 1200	60 Hz

Image rotation

Before rotating the monitor, you should set-up your computer to rotate the image. Rotating the image may require special rotation software or you may find that your computer is preloaded with video graphic drivers that allows image rotation. Check the Graphic Properties setting on your computer to see if this feature is available.

Try these steps to check if image rotation is available on your computer.

1. Right-click on the desktop and click **Properties**.
2. Select the **Settings** tab and click **Advanced**.
3. If you have ATI, select the **Rotation** tab and set the preferred rotation. If you have nVidia, click the **nVidia** tab, in the left-hand column select **NVRotate**, and then select the preferred rotation. If you have **Intel**, select the Intel graphics tab, click **Graphic Properties**, select the **Rotation** tab, and then set the preferred rotation.

Check with the manufacturer of your computer to see if graphic drivers with image rotation can be downloaded from their support website.

Understanding power management

Power management is invoked when the computer recognizes that you have not used your mouse or keyboard for a user-definable period. There are several states as described in the table below.

For optimal performance, switch off your monitor at the end of each working day, or whenever you expect to leave it unused for long periods during the day.

Table 2-4. Power indicator

State	Power Indicator	Screen	Restoring Operation	Compliance
On	Steady green	Normal		
Standby/Suspend	Steady amber	Blank	Press a key or move the mouse There may be a slight delay before the image reappears. Note: Standby also occurs if there is no image output to the monitor.	ENERGY STAR
Off	Off	Blank	Press a key or move the mouse There may be a slight delay before the image reappears.	ENERGY STAR

Caring for your monitor

Be sure to turn off the power before you perform any maintenance on the monitor.

Do not:

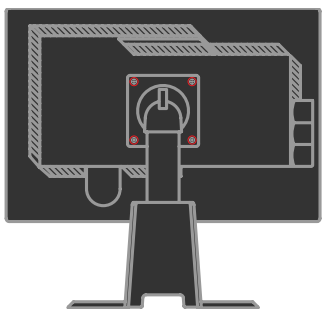
- Apply water or liquid directly to your monitor.
- Use solvents or abrasives.
- Use flammable cleaning materials to clean your monitor or any other electrical equipment.
- Touch the screen area of your monitor with sharp or abrasive items. This type of contact may cause permanent damage to your screen.
- Use any cleaner which contains an anti-static solution or similar additives. This may harm the coating of the screen area.

Do:

- Lightly dampen a soft cloth with water and use this to gently wipe the covers and the screen.
- Remove grease or finger marks with a damp cloth and a little mild detergent.

Detaching the monitor stand

After placing the monitor face down on a clean surface or soft cloth, remove the four screws from the stand to remove it from the monitor.

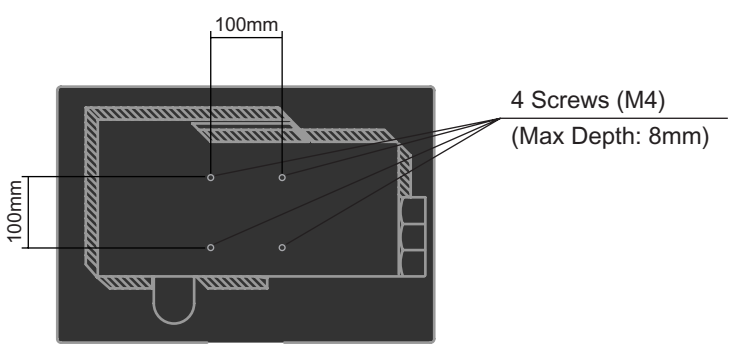


Wall Mounting (Optional)

Refer to the instructions that come with the VESA compatible base mounting kit.

1. Place the monitor face down on a non-abrasive surface on stable flat table.
2. Remove the stand.
3. Attach the mounting bracket from the wall mounting kit to the monitor.
4. Mount the monitor on the wall by following the instructions that come with the base mounting kit.

NOTE: For use only with UL(expand UL) Listed Wall Mount Bracket with minimum weight/load bearing capacity of 5.90 kg.



Chapter 3. Reference information

This section contains monitor specifications, instructions to manually install the monitor driver, troubleshooting information, and service information.

Monitor specifications

Table 3-1. Monitor specifications for type-model 4421-HB2

Dimensions	Height Depth Width	394.8 mm (15.54 in.) 257.3 mm (10.13 in.) 559.6 mm (22.03 in.)
Stand	Tilt range	Range: -0^0, $+30^0$
	Swivel	Range: -45^0, $+45^0$
	Lift	Range: 110.0mm
	Pivot	Yes (clockwise 90 degree)
VESA mount	Supported	100 mm (3.94 in.)
Image	Viewable image size Maximum height Maximum width Pixel pitch	609.6 mm (24 in.) 324.0 mm (12.75 in.) 518.4 mm (20.41 in.) 0.270 mm (.0106 in.) (V)
Power input	Supply voltage Max supply current	100 - 240 V~AC, 50/60 Hz 1.5 A
Power consumption **Note:** Power consumption figures are for the monitor and the power supply combined.	Max Consumption (Including USB hub) Typical Consumption Standby/Suspend Off	< 45 W < 40 W < 1 W (Analog and Digital) < 0.5 W
Video input (Analog)	Input signal Horizontal addressability Vertical addressability Clock frequency	Analog Direct Drive, 75 ohm 0.7 V 1920 pixels (max) 1200 lines (max) 205 MHz
Video input (Digital)	Interface Input Signal Horizontal addressability Vertical addressability Clock frequency	DVI VESA TMDS (Panel Link.) 1920 pixels (max) 1200 lines (max) 165 MHz

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Table 3-1. Monitor specifications for type-model 4421-HB2 (continued)

Video input (DP)	Interface	DP
	Horizontal addressability	1920 pixels (max)
	Vertical addressability	1200 lines (max)
	Clock frequency	165 MHz
Communications	VESA DDC	CI
Supported Display Modes (VESA Standard modes between noted ranges)	Horizontal frequency	VGA: 30 kHz - 94 kHz DVI: 30 kHz - 75 kHz DP: 30 kHz - 75 kHz
	Vertical frequency	50 Hz - 75 Hz
	Native Resolution	1920 x 1200 at 60 Hz
Temperature	Operating	0^0 to 45^0 C (32^0 to 113^0 F)
	Storage	-20^0 to 60^0 C (-4^0 to 140^0 F)
	Shipping	-20^0 to 60^0 C (-4^0 to 140^0 F)
Humidity	Operating	10% to 80%
	Storage	5% to 95%
	Shipping	5% to 95%

Troubleshooting

If you have a problem setting up or using your monitor, you might be able to solve it yourself. Before calling your dealer or Lenovo, try the suggested actions that are appropriate to your problem.

Table 3-2. Troubleshooting

Problem	Possible cause	Suggested action	Reference
The words "Out of Range" are shown on the screen, and the power indicator is flashing green.	The system is set to a display mode which is not supported by the monitor.	• If you are replacing an old monitor, reconnect it and adjust the display mode to within the specified range for your new monitor. • If using a Windows system, restart the system in safe mode, then select a supported display mode for your computer. • If these options do not work, contact the Support Center.	"Selecting a supported display mode" on page 2-6
The image quality is unacceptable.	The video signal cable is not connected with the monitor or system completely.	Be sure the signal cable is firmly plugged into the system and monitor.	"Connecting and turning on your monitor" on Page 1-4
	The color settings may be incorrect.	Select another color setting from the OSD menu.	"Adjusting your monitor image" on page 2-3
	The automatic image setup function was not performed.	Perform automatic image setup.	"Adjusting your monitor image"" on page 2-3
The power indicator is not lit and there is no image.	• The monitors power switch is not switched on. • The power cord is loose or disconnected. • There is no power at the outlet.	• Be sure the power cord is connected properly. • Be sure the outlet has power. • Power on the monitor. • Try using another power cord. • Try using another electrical outlet.	"Connecting and turning on your monitor" on Page 1-4

Table 3-2. Troubleshooting (continued)

Problem	Possible cause	Suggested action	Reference
Screen is blank and power indicator is steady amber or flashing green	The monitor is in Standby/Suspend mode	• Press any key on the keyboard or move the mouse to restore operation. • Check the Power Options settings on your computer.	"Understanding power management" on Page 2-7
The power indicator is green, but there is no image.	The video signal cable is loose or disconnected from the system or monitor.	Be sure the video cable is connected with the system properly.	"Connecting and turning on your monitor" on Page 1-4
	The monitor brightness and contrast are at the lowest setting.	Adjust the brightness and contrast setting on the OSD menu.	"Adjusting your monitor image" on page 2-3
One or more of the pixels appear discolored	This is a characteristic of the LCD technology and is not an LCD defect.	If there are more than five pixels missing, contact the Lenovo Support Center.	Appendix A, "Service and Support," on page A-1
• Fuzzy lines in text or a blurry image. • Horizontal or vertical lines through the image.	• Image setup has not been optimized Your system • Display Properties setting have not been optimized.	Adjust the resolution settings on your system to match the native resolution for this monitor: 1920 x1200 at 60 Hz.	"Adjusting your monitor image" on page 2-3 "Manual image setup"
		Perform automatic image setup. If automatic image setup does not help, perform manual image setup.	"Selecting a supported display mode" on page 2-6
		When working in the native resolution, you may find additional improvements by adjusting the Dots Per Inch (DPI) setting on your system.	See the Advanced section of your systems display properties.

Manual image setup

If automatic image setup does not establish the image that you prefer, perform manual image setup.

Note: Have your monitor powered on for about 15 minutes, until the monitor warms up.

1. Press ↵ at the bottom of the monitor to open the OSD menu.
2. Use ← or → to select and press ↵ to access.

3. Use ← or → to select **Clock** and **Phase** adjustment.

- **Clock** (pixel frequency) adjusts the number of pixels scanned by one horizontal sweep. If the frequency is not correct, the screen shows vertical stripes and the picture does not have the correct width.
- **Phase** adjusts the phase of the pixel clock signal. With a wrong phase adjustment, the picture has horizontal disturbances in light picture.

4. When the image no longer looks distorted, save the Clock and Phase adjustments.
5. Press ⮕ to leave the OSD menu.

Manually installing the monitor driver

Below are steps for manually installing the monitor driver in Microsoft® Windows Vista, Microsoft Windows XP® and Microsoft Windows 2000 Professional.

Installing the monitor driver in Windows Vista

To install the monitor driver in Microsoft® Windows Vista, do the following:

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow the system to boot into Windows Vista operating system.
4. Click **Start** → **Control Panel**, and then click the **Hardware and Sound** icon.
5. Click the **Personalization** icon.
6. Click the **Display Settings** icon.
7. Click the **Advanced Settings** button.
8. Click the **Monitor** tab.
9. Click the **Properties** button.
10. If the "**Windows needs your permission to continue**" window appears, click on **Continue** button. Then click the **Driver** tab.
11. Open the **"Update Driver Software-Generic PnP Monitor"** window by clicking on **Update Driver**. and then click the "**Browse my computer for driver software**" button.
12. Select "**Let me pick from a list of device drivers on my computer**".
13. Insert Lenovo Monitor CD into the CD drive and click the **Have Disk** button.Click on the **Browse** button and navigate to the following directory:

    X:\Monitor Drivers\Windows Vista

    (where **X** is the drive letter designator for the CD-ROM drive).
14. Select the "**L2440xwC.inf**" file and click the **Open** button. Click the **OK** button.
15. Select **Lenovo L2440xwC** and click **Next**. The files will be copied from the CD to your hard disk drive.

16. Close all open windows and remove the CD.
17. Restart the system.

Note: On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 x 1200 at a refresh rate of 60 Hz, or 640 x 480 at a refresh rate of 60 Hz.

Installing the monitor driver in Windows XP

Note: This section must be completed before continuing with the Windows XP automatic image setup.

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow the system to boot into Windows XP.
4. Open the **Display Properties** window by clicking **Start** → **Settings** → **Control Panel**, select/enter into the **Display** control panel.
5. Click the **Settings** tab.
6. Click the **Advanced** button.
7. Click the **Monitor** tab.
8. Click the **Properties** button.
9. Click the **Drivers** tab.
10. Open the **Hardware Update Wizard** window by clicking on the **Update Driver**, If appears **"Can Windows connect to Windows Update..."** window, please select

    "No, not this time" option. and then click **Next**.
11. Select **"Install from a list or Specific location(Advanced)"**, and then click **Next**.
12. Select **"Don't search. I will choose the driver to install"** option, and then click **Next**.
13. Click the **Have Disk** button. Click on the **Browse** button and navigate to the following directory:

    X:\Monitor Drivers\Windows XP & Windows 2000

    (where **X** is the drive letter designator for the CD-ROM drive).
14. Select the "**L2440xwC.inf**" file and click the **Open** button. Click on the **OK** button.
15. Select **Lenovo L2440xwC** and click **Next**. The files will be copied from the CD to your hard disk drive.
16. Close all open windows and remove the CD.
17. Restart the system.

Note: On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 x 1200 at a refresh rate of 60

Hz, or 640 x 480 at a refresh rate of 60 Hz.

Installing the monitor driver in Windows 2000

Note: This section must be completed before continuing with the Windows 2000 automatic image setup.

1. Turn off the computer and all attached devices.
2. Ensure that the monitor is connected correctly.
3. Turn on the monitor and then the system unit. Allow the system to boot into Windows 2000.
4. Open the **Display Properties** window by clicking **Start** → **Settings** → **Control Panel**, select/enter into the **Display** control panel.
5. Click the **Settings** tab.
6. Click the **Advanced** button.
7. Click the **Monitor** tab.
8. Click the **Properties** button.
9. Click the **Drivers** tab.
10. Open the **Upgrade Device Driver Wizard** window by clicking on **Update Driver**, and then click **Next**.
11. Select **"Display a list of the known drivers for this device so that I can choose a specific driver"** option, and then click **Next**.
12. Click the **Have Disk** button. Click on the **Browse** button and navigate to the following directory:

    X:\Monitor Drivers\Windows XP & Windows 2000

    (where **X** is the drive letter designator for the CD-ROM drive).
13. Select the "**L2440xwC.inf**" file and click the **Open** button. Click on the **OK** button.
14. Select **Lenovo L2440xwC** and click **Next**. The files will be copied from the CD to your hard disk drive.
15. Close all open windows and remove the CD.
16. Restart the system.

Note: On LCD monitors, unlike CRTs, a faster refresh rate does not improve display quality. Lenovo recommends using either 1920 x 1200 at a refresh rate of 60 Hz, or 640 x 480 at a refresh rate of 60 Hz.

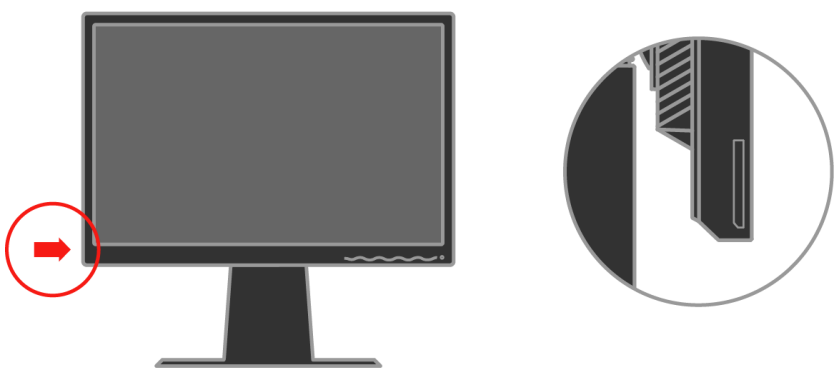
Getting further help

If you still can't solve your problem, please contact the Lenovo Support Center. For more information on contacting the Customer Support Center, please see Appendix A, "Service and Support," on page A-1.

Service information

Product numbers

The product number for your monitor is located on the side of the display bezel as shown below.



Customer responsibilities

The warranty does not apply to a product which has been damaged due to accident, misuse, abuse, improper installation, usage not in accordance with product specifications and instructions, natural or personal disaster, or unauthorized alterations, repairs or modifications.

The following are examples of misuse or abuse and not covered by warranty:

- Images burned onto the screen of a CRT monitor. Burned image is preventable by utilizing a moving screen saver or power management.
- Physical damage to covers, bezel, base and cables.
- Scratches or punctures on monitor screens.

Service parts

The following parts are for use by Lenovo service, or Lenovo authorized dealers, to support the customer warranty. Parts are for service use only. The table below shows information for model 4421-HB2.

Table 3-3. List of service parts

FRU (Field Replaceable Unit) Part number	Description	Color	Machine Type Model (MTM)
45J7670	Monitor_L2440x Wide	Business Black	4421-HB2
45J8702	Signal cable (Analog)	Business Black	4421-HB2
45J8703	Signal cable (Digital)	Business Black	4421-HB2
45J8704	USB cable	Business Black	4421-HB2
45J7671	DP cable	Business Black	4421-HB2
45J8701	Stand & Base	Business Black	4421-HB2

Appendix A. Service and Support

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of the product. Refer to your Lenovo Statement of Limited Warranty for a full explanation of Lenovo warranty terms.

Online technical support

Online technical support is available during the life of your product through the Lenovo Support Web site at http://www.lenovo.com/think/support.

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your option is installed in a Lenovo computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Telephone technical support

Installation and configuration support through the Customer Support Center will be withdrawn or made available for a fee, at Lenovo's discretion, 90 days after the option has been withdrawn from marketing. Additional support offerings, including step-by-step installation assistance, are available for a nominal fee.

To assist the technical support representative, have available as much of the following information as possible:

- Option name
- Option number
- Proof of purchase
- Computer manufacturer, model, serial number, and manual
- Exact wording of the error message (if any)
- Description of the problem
- Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to walk you through the problem during the call.

Worldwide telephone list

Phone numbers are subject to change without notice. For the most current phone numbers, go to http://www.lenovo.com/think/support and click **Support phone list**.

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Country or Region	Telephone Number
Africa	Africa: +44 (0)1475-555-055 South Africa: +27-11-3028888 and 0800110756 Central Africa: Contact the neares Lenovo Business Partner
Argentina	0800-666-0011 (Spanish)
Australia	131-426 (English)
Austria	Up and running support: 01-24592-5901 Warranty service and support: 01-211-454-610 (German)
Belgium	Up and running support: 02-210-9820 (Dutch) Up and running support: 02-210-9800 (French) Warranty service and support: 02-225-3611 (Dutch, French)
Bolivia	0800-0189 (Spanish)
Brazil	Sao Paulo region: (11) 3889-8986 Toll free outside Sao Paulo region: 0800-7014-815 (Brazilian Portuguese)
Canada	1-800-565-3344 (English, French) In Toronto only call: 416-383-3344
Chile	800-224-488 (Spanish)
China	800-810-1818 (Mandarin)
China (Hong Kong S.A.R.)	Home PC: 852-2825-7799 Commercial PC: 852-8205-0333 ThinkPad and WorkPad: 852-2825-6580 (Cantonese, English, Putonghua)
Colombia	1-800-912-3021 (Spanish)
Costa Rica	284-3911 (Spanish)
Croatia	0800-0426
Cyprus	+357-22-841100
Czech Republic	+420-2-7213-1316
Denmark	Up and running support: 4520-8200 Warranty service and support: 7010-5150 (Danish)
Dominican Republic	566-4755 566-5161 ext. 8201 Toll Free within the Dominican Republic: 1-200-1929 (Spanish)

Country or Region	Telephone Number
Ecuador	1-800-426911 (Spanish)
El Salvador	250-5696 (Spanish)
Estonia	+386-61-1796-699
Finland	Up and running support: 09-459-6960 Warranty service and support: +358-800-1-4260 (Finnish)
France	Up and running support: 0238-557-450 Warranty service and support (hardware): 0810-631-213 Warranty service and support (software): 0810-631-020 (French)
Germany	Up and running support: 07032-15-49201 Warranty service and support: 01805-25-35-58 (German)
Greece	+30-210-680-1700
Guatemala	335-8490 (Spanish)
Honduras	Tegucigalpa & San Pedro Sula: 232-4222 San Pedro Sula: 552-2234 (Spanish)
Hungary	+36-1-382-5720
India	1600-44-6666 Alternate Toll Free: +91-80-2678-8940 (English)
Indonesia	800-140-3555 +62-21-251-2955 (English, Bahasa, Indonesian)
Ireland	Up and running support: 01-815-9202 Warranty service and support: 01-881-1444 (English)
Italy	Up and running support: 02-7031-6101 Warranty service and support: +39-800-820094 (Italian)
Japan	Desktop: Toll free: 0120-887-870 For International: +81-46-266-4724 ThinkPad: Toll free: 0120-887-874 For International: +81-46-266-4724

Country or Region	Telephone Number
Japan	Both of the above numbers will be answered with a Japanese language voice prompt. For telephone support in English, please wait for the Japanese voice prompt to end, and an operator will answer. Please ask for ¡ ² English support please,¡ ² and your call will be transferred to an English speaking operator. PC Software: 0120-558-695 Overseas calls: +81-44-200-8666 (Japanese)
Korea	1588-5801 (Korean)
Latvia	+386-61-1796-699
Lithuania	+386-61-1796-699
Luxembourg	+352-298-977-5063 (French)
Malaysia	1800-88-8558 (English, Bahasa, Melayu)
Malta	+356-23-4175
Mexico	001-866-434-2080 (Spanish)
Middle East	+44 (0)1475-555-055
Netherlands	+31-20-514-5770 (Dutch)
New Zealand	0800-446-149 (English)
Nicaragua	255-6658 (Spanish)
Norway	Up and running support: 6681-1100 Warranty service and support: 8152-1550 (Norwegian)
Panama	206-6047 (Spanish)
Peru	0-800-50-866 (Spanish)
Philippines	1800-1888-1426 +63-2-995-8420 (English, Philipino)
Poland	+48-22-878-6999
Portugal	+351-21-892-7147 (Portuguese)
Romania	+4-021-224-4015
Russian Federation	+7-095-940-2000 (Russian)
Singapore	1800-3172-888 (English, Bahasa, Melayu)
Slovakia	+421-2-4954-1217

Country or Region	Telephone Number
Slovenia	+386-1-4796-699
Spain	91-714-7983 91-397-6503 (Spanish)
Sri Lanka	+94-11-2448-442 (English)
Sweden	Up and running support: 08-477-4420 Warranty service and support: 077-117-1040 (Swedish)
Switzerland	Up and running support: 058-333-0900 Warranty service and support: 0800-55-54-54 (German, French, Italian)
Taiwan	886-2-8723-9799 (Mandarin)
Thailand	1-800-299-229 (Thai)
Turkey	00800-4463-2041 (Turkish)
United Kingdom	Up and running support: 01475-555-055 Warranty service and support (hardware): 08705-500-900 Warranty service and support (software): 08457-151-516 (English)
United States	1-800-426-7378 (English)
Uruguay	000-411-005-6649 (Spanish)
Venezuela	0-800-100-2011 (Spanish)
Vietnam	For northern area and Hanoi: 84-4-8436675 For southern area and Ho Chi Minh City: 84-8-829-5160 (English, Vietnamese)

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